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THE EUROPEAN PRINCIPLES OF INTEGRATED COASTAL ZONE MANAGEMENT (ICZM) AND COASTAL EROSION MANAGEMENT: FIT FOR PURPOSE?

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Abstract

The European Recommendation on Integrated Coastal Zone Management contains a set of eight management principles. The six core principles form two groups, one concerned with strategic goals and one that has a local focus. The principles are presented as a menu of free-standing options, with no prioritization either within or between groups. In the case of coastal erosion management these characteristics result in irreconcilable conflicts. The principles require clarification, prioritization of the strategic principles and recognition that they are an indivisible integrated set which should not be used to select principles to advance a particular agenda.

Key-words: European Principles of ICZM; coastal erosion; strategic versus local conflicts

Résumé

La Recommandation Européenne concernant la gestion intégrée des zones côtières présente un ensemble de huit principes. Six d'entre eux, considérés comme centraux, peuvent être divisés en deux groupes, l'un concernant des objectifs stratégiques globaux et le second s'appliquant davantage au niveau local. Dans la recommandation, les différents principes sont présentés comme une liste d'options au choix, sans priorité à l'intérieur ou entre les groupes. Dans le cas de la gestion de l'érosion côtière, ces caractéristiques aboutissent à des contradictions de fond. Cette recommandation européenne nécessite une clarification, une hiérarchisation des principes stratégiques et leur reconnaissance comme un tout, intégré, indivisible, dont les éléments ne devraient pas être employés individuellement pour privilégier telle ou telle lecture, selon les priorités de l'ordre du jour.

Introduction

The European Recommendation on Integrated Coastal Zone Management (European Parliament and Council, 2002) presents eight principles to guide coastal management in Member States. The Recommendation derived from the European Commission's demonstration programme on integrated coastal zone management (European Commission, 1999). The eight management principles are:

- (a) a broad overall perspective (thematic and geographic)
- (b) a long-term perspective which will take into account the precautionary principle
- (c) adaptive management during a gradual process
- (d) local specificity and the great diversity of European coastal zones

- (e) working with natural processes and respecting the carrying capacity of ecosystems
- (f) involving all the parties concerned in the management process
- (g) support and involvement of relevant administrative bodies
- (h) use of a combination of instruments designed to facilitate coherence

These eight principles can be readily divided into 3 groups: The first group consists of 2 'procedural' principles, *support and involvement of relevant administrative bodies* and *use of a combination of instruments* that are focused on the attributes of the methods and procedures that might be used to best advance ICZM. The other two groups form the core of the Recommendation. There is a group of 3 'strategic' principles; *broad overall perspective*, *long-term perspective*, and *working with natural processes*. These principles mainly focus attention on long-term goals, and emphasize the sustainability of natural systems. The remaining group consists of 3 essentially 'local' principles; *local specificity*, *adaptive management during a gradual process*, and *involving all the parties concerned*. These focus interest on specific areas and problems, encourage tailoring of management to local conditions and encourage the participation of the public in formulating management policy. This paper focuses on the latter two groups.

Since the publication of the Recommendation in 2002 the principles have quickly become the standard against which progress in ICZM in Europe is measured (ETCTE, 2005 ; Rupprecht Consult, 2006). We have examined the principles more broadly elsewhere (McKenna and Cooper, in review), but here we critically examine the implications of the 6 core principles (i.e. those in the local and strategic groups) in relation to the single issue of coastal erosion management, and assess their contribution to this often contentious debate.

1. Coastal erosion: Local versus strategic principles

Intractable problems can occur where there is incompatibility between the strategic principles, which demand that management takes a very wide view both spatially and temporally, and the local principles which focus on the specific needs of specific people in specific places. These different perspectives may lead to opposing preferred "solutions", each of which is compatible with a different principle.

Perhaps the clearest demonstration of the strategic/local conflict occurs where private properties are threatened by coastal erosion. The village of Happisburgh on the Norfolk coast of England offers a relevant and highly-publicized case study (Fig. 1).

At Happisburgh, people whose homes are at immediate risk from rapid cliff retreat demand that Government come to their aid by providing coastal defences and/or compensation. In making these demands, individuals and pressure groups have explicitly invoked the local principles of *adaptive management* and *local specificity* (Kerby, 2005). The strategic and local principles support different and opposing responses to the fact of coastal erosion. The predictable local demand that defences should be maintained is in conflict with the equally predictable strategic view that it is not cost-effective or environmentally sustainable to do so. The principles offer no guidance on resolution because local priorities are as valid as strategic concerns, thus the way is open for protagonists to "pick a principle" to suit their favoured solution. Already there are numerous examples of interest groups invoking application of one or more of the local principles in support of coastal defence objectives.

The local principles might suggest that intervention to protect the village is justified. However, meeting a demand for coastal defences may compromise the wider aim of maintaining a sustainable coast. Engineered defences can create serious problems for other people (including future generations) at larger and longer spatial and temporal scales, as coastal areas downdrift suffer sediment starvation and beach erosion. Indeed, close to Happisburg, sea defences erected during the 1990s at Sea Palling are already causing erosion of adjacent beach and dune systems (Nicolson, 2006). Future generations of beach visitors, many of whom cannot afford to live at the coast, may be deprived of the sandy beaches and dunes they value so highly. Defences also require maintenance, and as sea levels rise and storms intensify they will have to be strengthened at great and increasing cost to future taxpayers.



Fig 1. The threatened village of Happisburg, Norfolk. Here the local and strategic principles support conflicting management policies and actions. (Photo: Mike Page at www.happisburgh.org.uk)

The strategic argument against the construction or maintenance of coastal defences is a powerful one because of the associated environmental, financial, and indeed social justice problems. However, Kerby (2005) writing from the perspective of residents in Happisburgh, presents an alternative *local specificity* argument in favour of compensation. On the face of it compensation could offer a win/win solution that would give 'social justice' to those at risk, but would also conserve the strategic principles focused on a sustainable coast because the coast is allowed to retreat naturally. However, compensation schemes have obvious negative implications for local and state finances, and the high costs raise issues of justice to present and future taxpayers. The introduction of a compensation scheme or State-sponsored property insurance scheme would create costly precedents, and could encourage development in high-risk areas, and so multiply problems in the years ahead.

Compensation is not a readily quantifiable, one-off call on the public purse. Where erosion is progressive, for example along much of the East Anglian coast in England, the erosion envelope and hence the compensation envelope will move landwards as the

coast retreats. Houses not at risk today will be at risk in 100 years time. As sea levels rise, and storms become more frequent and more intense, coastal retreat will accelerate, which means that demands on any taxpayer-serviced compensation fund will also increase sharply. It can be argued that those currently calling for compensation are self-serving, because they tend to argue for a compensation zone perceived as a static entity in which their own threatened property is located.

The local principles elevate local stakeholder participation to a central role in decision-making. This carries the risk that management actions regarding coastal erosion will be guided by the vagaries of local opinion, rather than science-based sustainable strategy. In Ireland, this can be illustrated at two sites. At Five Finger Strand in Co. Donegal cyclic erosion is superimposed on a slow progressive trend. There is little of value at risk, since only dune pasture lies within the erosion zone. Despite this, there is a public perception of an erosion "problem" and consequently intense pressure is placed on the local authority to take action to minimize erosion. In contrast, at Blackwater Head in Co. Wexford erosion is progressive and rapid and farmhouses are at risk. Here, however, erosion and loss of property are historically accepted as facts of life, and there is little pressure on the local authority to defend the coast.

This is not to argue that erosion should always be allowed to proceed. Piers and breakwaters present a hard reflective face to wave action and there are well-documented examples where they have led to downdrift erosion and other negative consequences. Nevertheless, water-borne commerce and recreation would be impossible without this infrastructure. Similarly it is generally accepted that vital infrastructure such as power stations must be protected.

2. Discussion

The weight given to the local principles in the Recommendation reflects its genesis in an analysis of local voluntary projects in which agreement and consensus largely replace executive decision-making by statutory authorities. At the small spatial scales typical of such projects local perspective is dominant, and the power deficit of the voluntary model means that it is imperative to seek an alternative source of authority and acceptability through multi-layered public involvement.

The local principles appear inviting because they harmonize with concepts of local democracy and accountability. Arguments based on the local principles can appear persuasive at small spatial and temporal scales, but they weaken steadily with increasing scale as strategic and sustainability concerns come to dominate decision-making (Cooper and McKenna 2007). If decision-making is too heavily influenced by the local principles the result could be a blinkered coastal management that does not take account of wider factors. Taken alone, the local principles, at best, take no account of sustainability; at worst they actively militate against it. National policy should be guided primarily by the larger and longer scale considerations of the strategic principles, because only they can deliver sustainability. The local principles should work within the strategic principles as exceptions, or subsidiary decisions within a wider framework.

As it stands the Recommendation lacks a clear statement that the strategic principles have priority. This is not a flaw in drafting. It reflects the ethos of a Recommendation which is advice and persuasion, not prescriptive statement or even the ranking or prioritization of suggested actions. A Recommendation allows the European institutions

to make their views known and to suggest a line of action without imposing any legal obligation on those to whom it is addressed. In contrast, other European instruments such as Directives, Regulations and Decisions are legally binding on Member States, and must give rise to real actions. The principles are presented in the Recommendation as a set of discrete precepts; none is deemed to have higher priority than another, nor are they stated to be an organic whole or indivisible set. Avoidance of prescription and prioritization may be characteristic of European Recommendations, but it constitutes a fundamental weakness because when considered separately, rather than as a balanced counter-weighted set, the principles are susceptible to interpretations which will not produce a sustainable coastal management. It should be acknowledged that the findings of the EU sponsored EuroSION project do put an appropriate emphasis on strategic concerns (European Commission 2004).

All of the principles cannot be implemented all of the time. On a given coastal stretch, it is simply not possible to implement mutually incompatible policies to deal with coastal erosion, and managers must pick the option they consider most appropriate to the case before them. This is acceptable, provided that decisions are made after careful consideration of the full implications of the choice made. In practice, however, various interests tend to "cherry pick" the principles by choosing the ones that suit their own objectives, while ignoring or even denigrating the others. For example, those directly concerned about homes threatened by erosion will prioritize the principles of local specificity and adaptive management. In contrast, an environmentalist, who faces no personal loss, may insist that the strategic principles of long-term perspective and the unhindered operation of natural processes should take precedence, regardless of personal misfortunes. In this type of debate between advocates of opposing actions, the principles tend to be selectively used as weapons against opponents.

The situation is more complex than a simple choice of the principle best suited to the needs of a particular situation. Even within one principle, choice of scale can lead to interpretations that lie so far apart that they can be used to bolster opposite sides of an argument. For example, local specificity and adaptive management are obvious supports for those promoting the construction of coastal defences. However, local specificity could be interpreted to mean that in a given location local factors may indicate that it is both economically and environmentally unsustainable to defend the coast; therefore natural processes should be allowed to work unhindered. Even if defences or a compensation scheme were to be implemented, local specificity could be invoked to put restrictions on property owners, including forfeiture of many of the normal legal rights of property owners. These are forms of local specificity that may be compatible with strategic goals, but they are unlikely to be favoured by local people.

Viewed pessimistically, the European principles of ICZM are little more than aspirations couched in the language of a vision statement for coastal management. Such aspirational statements have little practical utility, because they are open to tendentious interpretation and therefore can be selectively used to support opposite sides of an argument. They tell us what to consider in broad terms but they are "too abstract to be useful" (Dutch Government, 2005 p.14). A more balanced view might be that the principles cannot provide a template for management because they are not formulated as measurable objectives, and even less so as a set of management regulations. An interesting contrast with the European Principles of ICZM is the coastal policy of the UK's major land-owning NGO, the National Trust. The Trust's coastal policy is

underpinned by a number of principles, several of which are similar to those in the European Recommendation (The National Trust, 2006). Among these are:

The Trust accepts that the coast is dynamic and changing and will work with the natural processes of coastal erosion and accretion wherever possible. *and:*

The Trust will only support interference with natural coastal processes where it believes there is an overriding benefit to society in social, economic or environmental terms.

Although broadly similar, there is a significant contrast here with the European principles in that these policy statements are entirely compatible; the strategic principles prevail but there is sufficient flexibility to cover exceptional situations. This allows the Trust to manage its properties in a coherent and integrated way. In line with these policies, and despite requests from other landowners, throughout the 1990s the Trust refused to cooperate in strengthening the gravel ridge at Porlock in Somerset, England in the years before it finally breached during a storm in 1996 (Orford and Jennings, 1998). However, in 1998 at Downhill in Northern Ireland the Trust completed a £250,000 scheme to stabilize the sea cliff supporting the 18th century Mussenden Temple (Doherty, 1997). Here, the Trust set aside its default policy of allowing natural processes to proceed uninterrupted, rather than lose a prime tourist attraction or risk moving the building inland. In this specific case the Trust made a considered judgment that local considerations (socio-economic and cultural value) should take precedence over the strategic "natural processes" principle. Nevertheless, the default remains that the strategic, long-term holistic principles prevail in Trust policy. It is unfortunate that the European Recommendation does not explicitly state that the strategic principles should be prioritized in this way.

Conclusion

Tension between the local and strategic principles of coastal management can produce opposing and irreconcilable differences in the management of coastal erosion. Ironically, the principles of *integrated* coastal zone management are not integrated with each other, which leaves the way open for selective interpretations to support virtually any policy or action. With no effective guidance on the resolution of strategic/local conflicts the inevitable outcome is a series of 'political' compromises.

These problems of conflict arise not because any of the principles are inherently "wrong" in themselves; rather the problems lie in their interrelationships and balance. The basic reason why the principles are flawed is that they appear in a Recommendation, a format traditionally used for the communication of non-prescriptive, non-prioritized advice and persuasion. Many of the principles are expressed in language that lacks clarity and precision; consequently they are open to interpretation and can be manipulated to suit both personal and institutional agendas. The principles are not prioritized and so strategic objectives are not given primacy over local concerns. In addition, the Recommendation does not make it clear that the principles are an indivisible set that cannot be picked through to find one to serve a specific policy outcome.

The principles of ICZM are only really useful if they inform a coherent integrated strategy at national level. The absence of such strategies has encouraged *ad hoc* use of the Recommendation by individuals and pressure groups who invoke particular principles to serve short-term self interest, notably in the context of coastal erosion. It may be that the

principles were always intended to guide policy, and that their widespread use to advance specific objectives was not anticipated. However, given their genesis in a Demonstration Programme based on voluntary projects in which stakeholder participation was strongly encouraged, no one can be surprised that the public should feel a strong sense of ownership.

The standing of the European principles of ICZM remains that of the document in which they appear – a recommendation. The casual response of some Member States to the Recommendation simply reflects its lack of legal authority, something that can be ignored, sidelined, selectively interpreted, partially implemented, diluted or subverted. There remains an urgent need to promote integration of the principles, and explicit prioritization of the strategic principles, through a legally binding instrument. Only a directive can achieve this. The outlook may appear unpromising given the recent comment in an EU Communication that, "at this time a new specific legal instrument to promote ICZM is not foreseen" (European Commission, 2007 p. 5). Nevertheless, there are reasons to believe that future prospects for ICZM in Europe are actually quite positive. Every recent EC and international environmental management initiative advocates integration, and there is a strong sense that statutory ICZM is on its way, even if there is no ICZM Directive. Among the vehicles that might carry this ICZM legislation are, at national level in the UK, the new Marine Bill, and at European level a number of proposed instruments including the Marine Strategy Directive, the Floods Directive and the forthcoming Maritime Policy. At international level the OSPAR Working Group, which includes the European Community, is also moving in the same direction.

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